

CLAIMS

I claim:

1. A method for using a hardware I/O control
5 block array by a parallel SCSI host adapter, said
method comprising:
 partitioning said hardware I/O control block
 array for said parallel SCSI host adapter into
 first and second pages;
10 using only said first page for non-Packetized
 SCSI Protocol hardware I/O control block storage;
 and
 using said first and second pages for
 Packetized SCSI Protocol hardware I/O control
15 block storage.
2. The method of Claim 1 wherein using said first
and second pages for Packetized SCSI Protocol hardware
I/O control block storage further comprises:
20 using said first page only when all available
 storage sites on said second page are used.
3. The method of Claim 1 further comprising:
 maintaining a first page free site queue
25 for said first page by a driver for said
 parallel SCSI host adapter.
4. The method of Claim 3 further comprising:
 maintaining a second page free site
30 queue for said second page by said driver for
 said parallel SCSI host adapter.
5. The method of Claim 1 further comprising:
 maintaining a second page free site
35 queue for said second page by a driver for
 said parallel SCSI host adapter.

6. The method of Claim 1 further comprising:
using a hardware I/O control block array
pointer having a low byte and a high byte to
address a storage site in said hardware I/O
control block array.
7. The method of Claim 6 further comprising:
loading a tag from a reconnecting target into
said low byte only.
8. The method of Claim 7 further comprising:
loading said high byte with a zero value.
9. The method of Claim 6 further comprising:
loading a tag from a reconnecting target into
said low byte and said high byte.
10. A system comprising:
a parallel SCSI host adapter comprising;
a sequencer; and
a hardware I/O control block array
pointer, coupled to said sequencer, having a
low byte and a high byte; and
a memory, coupled to said hardware I/O
control block array pointer, including a hardware
I/O control block array comprising:
a plurality of pages including a first
page and a second page,
wherein said first page includes a
plurality of hardware I/O control block
storage sites equal to a number of
unique tag values that can be returned
by a non-Packetized SCSI Protocol tagged
queue target reconnecting to said
parallel SCSI host adapter; and

said second page includes another plurality of hardware I/O control block storage sites.

5 11. The system of Claim 10 wherein said memory is external to said parallel SCSI host adapter.

12. The system of Claim 10 wherein said memory is internal to said parallel SCSI host adapter.

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13. The system of Claim 10 further comprising:

a driver coupled to said parallel SCSI host adapter, wherein said driver allocates and de-allocates storage sites in said hardware I/O control block array.

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14. The system of Claim 13 wherein said driver allocates sites for non-Packetized SCSI hardware I/O control blocks only in said first page.

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15. The system of Claim 13 wherein said driver allocates sites for Packetized SCSI hardware I/O control blocks in said first page and in said second page.

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16. The system of Claim 15 wherein said driver allocates sites for Packetized SCSI hardware I/O control blocks in said first page only when all available sites in said second page are used.

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17. The system of Claim 13 further comprising:
a first page free site queue coupled to said driver.

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18. The system of Claim 17 further comprising:

19. The system of Claim 13 further comprising:
5 a second page free site queue coupled to
said driver.

20. A method for using a hardware I/O control
block array by a parallel SCSI host adapter, said
10 method comprising:

- partitioning said hardware I/O control block
array for said parallel SCSI host adapter into
first and second pages; and
- using only said first page for non-Packetized
15 SCSI Protocol hardware I/O control block storage;
using said first and second pages for
Packetized SCSI Protocol hardware I/O control
block storage;
- maintaining a first page free site queue for
20 said first page by a driver for said parallel SCSI
host adapter;
- maintaining a second page free site queue for
said second page by said driver for said parallel
SCSI host adapter;
- 25 using a hardware I/O control block array
pointer having a low byte and a high byte to
address a storage site in said hardware I/O
control block array; and
- loading a tag from a reconnecting target into
30 said hardware I/O control block array pointer.